Atty. Docket: H 3680A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First applicant: Roberto Pavez Aranguiz

Application No.:	10/685,613	Examiner:	William K. Cheung
Filing Date:	October 15, 2003	TC/A.U.:	5097 / 1796

Title: Filler Containing Polymer Dispersion, Method For Its Production And Use

Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

PETITION TO THE DIRECTOR UNDER 37 CFR §1.181 REQUESTING WITHDRAWAL OF FINAL REJECTION

Notice of impending Deadline.

This PETITION is being filed concurrently with a Notice of Appeal. Applicant respectfully requests that this PETITION be considered and a decision provided prior to the July 15, 2008 deadline for filing an Appeal Brief so that Applicant will have time to continue prosecution of this application.

This PETITION.

37 CFR §1.181 states:

> (a) Petition may be taken to the Director:
>
> (1) From any action or requirement of any examiner in the ex parte prosecution of an application, or in the ex parte or inter partes prosecution of a reexamination proceeding which is not subject to appeal to the Board of Patent Appeals and Interferences or to the court; . . .
>
> (b) Any such petition must contain a statement of the facts involved and the point or points to be reviewed and the action requested. Briefs or memoranda, if any, in support thereof should accompany or be embodied in the petition; and where facts are to be proven, the proof in the form of affidavits or declarations (and exhibits, if any) must accompany the petition.
>
> (c) When a petition is taken from an action or requirement of an examiner

> in the ex parte prosecution of an application, or in the ex parte or inter partes prosecution of a reexamination proceeding, it may be required that there have been a proper request for reconsideration (Sec. 1.111) and a repeated action by the examiner. . . .
>
> (d) Where a fee is required for a petition to the Director the appropriate section of this part will so indicate. If any required fee does not accompany the petition, the petition will be dismissed.
>
> . . .
>
> (f) The mere filing of a petition will not stay any period for reply that may be running against the application, nor act as a stay of other proceedings. Any petition under this part not filed within two months of the mailing date of the action or notice from which relief is requested may be dismissed as untimely, except as otherwise provided. This two- month period is not extendable.

A. Jurisdiction.

This is a PETITION to the Director under 37 CFR §1.181 from a decision of Examiner William K. Cheung finally rejecting most, but not all, claims in patent application no. 10/685,613. The Director has authority to decide this PETITION under 37 CFR §1.181.

MPEP §1002.02(c)(3)(a) states that a petition under 37 CFR §1.181 invoking the supervisory authority of the Director, for example to review prematureness of a final rejection, will be decided by the Technology Center Director.

B. Timeliness of this PETITION.

A final Office Action was mailed on 11/16/2007. Applicants filed a Response After Final Office Communication (without claim amendment) on 1/15/2008. An Advisory Action was mailed on 2/13/2008. A telephone conference with the Examiner was held on March 20, 2008. Applicants filed a Second Response After Final Office Communication (without claim amendment) on 3/25/2008 at the suggestion of the Examiner. A second Advisory Action was mailed on 4/10/2008. Telephone conferences were held with the Examiner (4/17/2008) and with Supervisor David WU (4/22/2008). Applicants filed a Third Response After Final Office Communication (without claim amendment) on 4/24/2008 as a result of these conferences. A telephone conference with the Examiner was held on 4/28/2008. Applicants filed a Fourth Response After Final Office Communication (without claim amendment) on 4/28/2008 as a result of this conference. A telephone conference with the Examiner was held on 5/7/2008.

This PETITION is being filed less than two weeks after the last telephone conference with the Examiner and less than two months after the second Advisory Action mailing date. This PETITION is timely under 37 CFR §1.181(f).

C. Requirement for reconsideration and final action

In view of the above course of communications from 1/15/2008 to the present Applicant asserts that any requirement for traverse, reconsideration and a repeated action by the Examiner under 37 CFR §1.181(c) is fulfilled.

D. Fees.

No fee for this PETITION appears necessary under 37 CFR §1.17 or the United States Patent And Trademark Office revised fee schedule and therefore no check is enclosed herewith.

Should a fee be required for this PETITION Applicant's representative authorizes and requests that the Commissioner charge Deposit Account 12-2135 of Henkel Corporation for any required fee. Any refunds should be added to Deposit Account 12-2135 of Henkel Corporation.

E. Statement of facts.

- This application was filed on 10/8/2003 as a divisional application of U.S. Application No. 09/869,467. The parent '467 application was examined by Examiner William Cheung, the Examiner of the present application. See PAIR, Image File Wrapper for application no. 10/685613, 10/15/2003 Transmittal of New Application.
- The present application included claim 19 as filed. Claim 19 depends directly from independent claim 18. Claim 19 recited: "The filler containing polymer dispersion

as claimed in claim 18 wherein the polymer particles have a diameter (d50) of 0.03 to 0.5 µm." See Exhibit 1.

- The history of this application includes rejections of all claims; an Appeal; an Allowance of all claims; a RCE to have new documents considered; and rejections over new Art not cited in that IDS. See PAIR, Image File Wrapper for application no. 10/685613.
- Through the prosecution history claim 19 was amended once on 10/5/2006 to recite: "The filler containing polymer dispersion as claimed in claim 18 wherein the synthetic organic polymer particles have a diameter (d50) of 0.03 to 0.5 µm." Parent claim 18 was also slightly amended at this time. See Exhibit 2.
- On 11/16/2007 a Final Action was mailed rejecting all claims. Claim 19 was rejected only as being anticipated and only over U.S. Patent No. 6,140,394 to Kamiyama et al. See Exhibit 3.
- On 1/15/2008 Applicant's undersigned representative filed a Response After Final Office Communication (without claim amendment). This Response on page 5 explicitly states, in bolding: "**The Kamiyama reference does NOT teach the polymer particle diameter recited in claim 19.**" This point is supported in the following remarks. See Exhibit 4.
- On 2/13/2008 an Advisory Action was mailed maintaining the rejection of all claims. Page 2 of the Action states: "Further, applicants must recognize that Kamiyama et al (col. 1, line 32-34) clearly disclose organic particles having a particle size of 1 micron maximum, which implies particles size distribution having a d50) of less than 0.5 micron." See Exhibit 5.
- On 3/20/2008 Examiner Cheung and Applicant's representative had a telephone conference directed only to the rejection of claim 19 and the statement in the 2/13/2008 Advisory Action. Examiner Cheung suggested filing a second After Final Response more explicitly arguing the patentability of claim 19. See Exhibit 6.
- On 3/25/2008 Applicant's undersigned representative filed a second Response After Final Office Communication (without claim amendment). This Response points

out in expanded detail why the Kamiyama reference does NOT teach the polymer particle diameter recited in claim 19. See Exhibit 7.

- On 4/10/2008 a Second Advisory Action was mailed. Page 2 of the Action states: "In view of the argument filed March 25, 2008, the rejection of Claim 19 under 35 U.S.C. 102(e) as being anticipated by Kamiyama et al (US 6,140,394) is withdrawn. The Second Advisory Action indicates at point 7 that claim 19 is objected to, apparently for depending from a rejected base claim. The Second Advisory Action does not indicate that claim 19 contains allowable subject matter. The remaining claims remain rejected. Claim 19 is not rejected, allowed or allowable. The ONLY objection to patentability of claim 19 on the record is to form. See Exhibit 8.
- On 4/17/2008 Examiner Cheung and Applicant's representative had a telephone conference directed only to the status of claim 19. On 4/22/2008 Supervisor David Wu and Applicant's representative have a telephone conference directed only to the status of claim 19. See Exhibit 6.
- On 4/24/2008 Applicant's undersigned representative filed a third Response After Final Office Communication making claim 19 independent. See Exhibit 9.
- On 4/28/2008 Applicant's undersigned representative filed a fourth Response After Final Office Communication cancelling claim 19 and adding its features to direct parent claim 18. The Response also adds the same feature to independent claim 25 and amends claim 38 to correct typographical errors. See Exhibit 10.

F. Argument.

Claim 19 has been pending almost unchanged throughout prosecution of this application. For the last two (2) years claim 19 has been rejected ONLY under 35 U.S.C. 102(e) as having each feature and relationship anticipated ONLY over U.S. Patent No. 6,140,394 to Kamiyama et al.

Applicant's representative explicitly pointed out the patentability of claim 19 over the Kamiyama reference to Examiner Cheung in the 1/15/2008 Response After Final Office Action. Applicant's representative expanded on this same patentability of claim 19 in telephone conversations and a Second Response After Final Office Action filed on

3/25/2008.

The 4/10/2008 Advisory Action admits on page 2 that "In view of the argument filed March 25, 2008, the rejection of Claim 19 under 35 U.S.C. 102(e) as being anticipated by Kamiyama et al (US 6,140,394) is withdrawn." Thus, the record shows that claim 19 is not anticipated by, or obvious over, any art of record. Claim 19 is only "objected to", apparently over its dependence from a rejected base claim. However, this Advisory Action does NOT indicate that claim 19 is allowable and explicitly indicates that no claims are allowed.

Applicant's representative has engaged in conversation with Examiner Cheung and prepared and filed two (2) responses amending claim 19 or claim 18 from which claim 19 directly depends in a good faith effort to overcome the remaining objection. In a telephone conference on May 7, 2008 Applicant's representative verbally offered to Examiner Cheung to cancel, or have cancelled by Examiner's amendment, claims 25-33 and 35 which are not dependent from claim 18. This cancellation would overcome the objection to claim 19 by incorporating the features of claim 19 into parent claim 18, and leave pending only claims depending from claim 18. The offer was declined by Examiner Cheung.

Presently, the record shows that claim 19 is neither rejected over art nor allowable. If a further search of claim 19 is needed the finality of the 11/16/07 Action is improper and should be withdrawn so that such search can be done. If claim 19 is allowable over the Art then Applicant's 4/28/2008 amendment, especially in view of Applicant's offer to cancel claims outside of the claim 18 family, is sufficient to overcome any proper objection.

G. points to be reviewed.

- Why hasn't claim 19 been indicated to be allowable over the art after Applicant's 1/15/2008 and 3/25/2008 Responses and the 4/10/2008 Advisory Action admission that all art of record has been overcome?
- If claim 19 is not allowable and a further search of claim 19 is needed, why hasn't the finality of the present rejection been withdrawn and a search conducted?

- If claim 19 is allowable, why does Applicant's 4/28/2008 Fourth Response After Final Office Communication not overcome the only remaining objection to claim 19, especially in view of Applicant's offer to Examiner Cheung to cancel, or have cancelled by Examiner's amendment, claims 25-33 and 35 which are not dependent from claim 18.

H. Action requested.

Applicant hereby petitions the Director under 37 CFR §1.181 to:

1. **Refund the Notice of Appeal fee ($510) which was required to maintain pendency to file this PETITION after Applicants had overcome all rejections and had amended the claims and offered to cancel claims to overcome any proper objection.**
2. **Refund the third month extension fee ($590) which was required to prosecute this application AFTER the 4/10/2008 Advisory Action admitted that claim 19 was not rejected and not allowable.**
3. **Either, withdraw the finality of the 11/16/2007 Action and search claim 19, OR allow claims 18, 20-24, 34 and 37-39 as amended in Applicant's 4/28/2008 Response. Applicant agrees to cancel claims 25-33 and 35 should such allowance be granted.**

Respectfully submitted,

Date: 5-15-2008

By: ______________
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EXHIBIT 1

Docket No. H3680A

Serial No. ______ Attorney DSO/mlc

Applicant Roberto Pavez Aranguiz

The Patent Office acknowledges, and has stamped hereon the date of the receipt of the items checked below:

☒ SPECIFICATION 28 PAGES
☐ DRAWINGS SHEETS
☒ DECLARATION 2 pages
☐ ASSIGNMENT
☐ ASSIGNMENT RECORDATION COVER SHEET
☒ INFORMATION DISCLOSURE STATEMENT
☑ PTO FORM 1449/~~REFERENCES~~ - 1 page
☒ TRANSMITTAL utility
  ☒ AUTHORIZED TO CHARGE DEPOSIT ACCOUNT
☐ EXTENSION OF TIME REQUEST
☒ AMENDMENT/~~RESPONSE~~ Preliminary - 8 pages
☐ FEE CALCULATION SHEET
☐ BASE ISSUE FEE
☐ NOTICE OF APPEAL
☐ TERMINAL DISCLAIMER
☐ PCT REQUEST ____PAGES; DESCRIPTION ____PAGES; CLAIMS ____PAGES; ABSTRACT ____PAGES
☐ PCT TRANSMITTAL LETTER PTO-1390
☐ RESPONSE TO INVITATION TO CORRECT DEFECTS
☒ OTHER
Fee Transmittal - 1 page
Abstract (page 29)

22386 U.S. PTO
10/685613
10/15/03

☒ ALL ABOVE SENT VIA CERT. OF ~~MAIL~~/EXPRESS MAIL
ON 10-15-03
LABEL NO. EV 274370030 US

"Express Mail" mailing label number EV 274370030US

PATENT
Docket No. H 3680A US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of
Roberto Pavez Aranguiz

Divisional of
Serial No. 09/869,467
Filed: June 28, 2001
Title: FILLER-CONTAINING POLYMER DISPERSION, METHOD FOR ITS PRODUCTION AND USE

Examiner: W. K. Cheung
Art Unit: 1713

PRELIMINARY AMENDMENT

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Please enter the following amendments in the application after the application has has been accorded a serial number and before the filing fee is calculated.

IN THE SPECIFICATION:

At page 1 delete the title and enter therefore:

FILLER-CONTAINING POLYMER DISPERSION, METHOD FOR ITS PRODUCTION AND USE

CROSS REFERENCE TO RELATED APPLICATIONS

This application is a Divisional Application of U.S. Ser. No. 09/869,467, filed June 28, 2001, which is a national stage application under 35 U.S.C. §371 of International Application PCT/EP99/101151, filed December 21, 1999 claiming priority under 35 U.S.C. § 199 to CL 3177/98 filed December 30, 1998 and DE 199 03 801.5 filed February 2, 1999, the entire contents of each application incorporated herein by reference.--; and

Between lines 5 and 6 enter:

BACKGROUND OF THE INVENTION.

At page 3 between lines 25 and 26 enter

BRIEF DESCRIPTION OF THE INVENTION.

At page 5 between lines 9 and 10 enter:

DETAILED DESCRIPTION OF THE INVENTION.

IN THE CLAIMS:

Please cancel claims 1 through 17 without prejudice and enter the following new claims 18-39 in the application.

18. (New claim) A filler-containing polymer dispersion comprising water, particles of at least one filler selected from the group consisting of organic fillers, inorganic fillers and mixtures thereof, at least one water-soluble organic polymer with a molecular weight of more than 600 and an HLB value of at least 15 and particles of at least one synthetic organic polymer, polymerized in the presence of at least one type of the filler particles, wherein a ratio of a particle size of the filler particles to a particle size of a polymer particles is in the range from 1.1:1 to 20:1.

19. (New claim) The filler-containing polymer dispersion as claimed in claim 18 wherein the polymer particles have a diameter (d50) of 0.03 to 0.5 μm.

20. (New claim) The filler-containing polymer dispersion as claimed in claim 18, wherein the inorganic filler comprises a member selected from the group consisting of chalk ($CaCO_3$), gypsum ($CaSO_4$) as anhydrite, hemihydrate or dihydrate, silica flour, silica gel, titanium dioxide, talcum, a layer silicate, barium sulfate, barite and mixtures thereof and wherein the organic filler comprises a member selected from the group consisting of polyvinyl acetate, vinyl acetate copolymers, polystyrene, polyethylene, polypropylene, waxes, polybutylene, polybutadiene, copolymers of butadiene and styrene, polyacrylonitrile, resins, polyacrylate esters, polymethacrylate esters polymers containing silyl groups and

mixtures thereof.

21. (New claim)The filler-containing polymer dispersion as claimed in claim 18, wherein the at least one water-soluble polymer comprises a member selected from the group consisting of polyvinyl alcohol, cellulose ethers, carboxymethyl celluloses, hydroxyethyl celluloses, casein, potassium alginate, sodium alginate, polyurethanes and mixtures thereof.

22. (New claim) The filler-containing polymer dispersion as claimed in claim 18, wherein the dispersion comprises at least one ionic surfactant with an HLB value of 1 to 10.

23. (New claim) The filler-containing polymer dispersion as claimed in claim 18 wherein the dispersion comprises at least one nonionic surfactant with an HLB value of 13 to 20.

24. (New claim) The filler-containing polymer dispersion as claimed in claim 18 comprising:

    a) 10% to 70% by weight of a water-insoluble organic polymer;
    b) 5% to 55% by weight of filler particles;
    c) 0.02% to 1.0% by weight of a nonionic surfactant with an HLB value of 13 to 20;
    d) 0.01% to 1.0% by weight of an ionic surfactant with an HLB value of 1 to 10;
    e) 0.05% to 10% by weight of the water-soluble organic polymer with a molecular weight of more than 600 and an HLB value of more than 15;

f) 24.92% to 84.89% by weight of water and

g) 0 to 30% by weight of additives.

25. (New claim) The process for the production of a filler-containing polymer dispersion, which comprises: emulsion polymerizing at least one radical-polymerizable monomer in an aqueous phase using a polymerization initiator, the aqueous phase containing filler particles of at least one dispersed filler with a particle size (d50) of 0.01 to 0.5µm and at least one water-soluble organic polymer with a molecular weight of more than 600 and an HLB value of more than 15 whereby a dispersion comprising filler particles and polymer particles is formed.

26. (New claim) The process as claimed in claim 25, wherein the aqueous phase contains an ionic surfactant.

27. (New claim) The process as claimed in claim 25, wherein the aqueous phase contains a nonionic surfactant.

28. (New claim) The process as claimed in claim 25, wherein the polymerization initiator is water-soluble.

29. (New claim) The process as claimed in claim 25, wherein the process is carried out in at least two successive stages comprising:

a) a first stage comprising preparing a dispersion containing:

1) at least one ionic surfactant with an HLB value of 1 to 10 or a nonionic surfactant with an HLB value of 13 to 20 or a mixture of two or more thereof,

2) at least one inorganic filler with a particle size (d50) of 0.01 to 0.5 µm,

3) at least one polymerization initiator and

4) at least one water-soluble organic polymer with a molecular weight of more than 600 and an HLB value of more than 15 and then heating the dispersion to a temperature of 70 to 90°C; and

b) a second stage comprising adding and polymerizing at least one radical-polymerizable monomer in the dispersion prepared in the first stage.

30. (New claim) The process as claimed in claim 29 wherein the inorganic filler particles are added before the polymerization initiator.

31. (New claim) The process as claimed in claim 25, wherein the filler particles dispersed in the aqueous phase are pre-emulsified with one or more monomers.

32. (New claim) The process as claimed in claim 31, wherein the polymerization initiators are added in portions to the dispersion.

33. (New claim) The filler-containing polymer dispersion, produced by the process claimed in claim 25.

34. (New claim) An adhesive or surface coating composition, comprising at least one filler-containing polymer dispersion of claim 18.

35. (New claim) The adhesive or surface coating composition produced by the process of claim 25.

36. (New claim) The filler-containing polymer of claim 19, wherein the inorganic filler comprises a member selected from the group consisting of chalk ($CaCO_3$), gypsum ($CaSO_4$) as anhydrite, hemihydrate or dihydrate, silica flour, silica gel, titanium dioxide, talcum, a layer silicate, barium sulfate, barite and mixtures

thereof and wherein the organic filler comprises a member selected from the group consisting of polyvinyl acetate vinyl acetate copolymers, polystyrene, polyethylene, polypropylene, waxes, polybutylene, polybutadiene, copolymers of butadiene and styrene, polyacrylonitrile, resins, polyacrylate esters, polymethacrylate esters polymers containing silyl groups and mixtures thereof.

37. (New claim) The filler-containing polymer dispersion as claimed in claim 19, wherein the dispersion comprises at least one ionic surfactant with an HLB value of 1 to 10.

38. (New claim) The filler-containing polymer dispersion as claimed in claim 18 comprising:

a) 10% to 70% by weight of a water insoluble organic polymer;
b) 5% to 55% by weight of filler particles;
c) 0.05% to 0.5% by weight of a nonionic surfactant with an HLB value of 13 to 20;
d) 0.02% to 0.5% by weight of an ionic surfactant with an HLB value of 1 to 10;
e) 0.05% to 10% by weight of a water-soluble organic polymer with a molecular weight of more than 600 and an HBL value of ore than 15;
f) 24.88% to 84.88% by weight of water; and
g) 0% to 30% by weight of additives.

39. (New claim) The filler-containing polymer dispersion of Claim 18 containing at least one nonionic surfactant with an HLB of 13 to 20 and an ionic surfactant with an HLB of 1 to 10 wherein a ratio by weight of nonionic surfactant to ionic surfactant is from about 5:1 to about 1:5.

DISCUSSION

Applicants request that the amendments be entered in the specification. The amendments are of a formal nature to enter headings required by the United States Patent and Trademark Office. No new matter has been entered by amendment to the specification.

The original claims have been canceled and new claims 18-39 have been entered. The new claims are fully supported in the specification and claims as originally filed. No new matter has been entered by amendment to the claims.

The amendment to the claims are entered to place the claims in proper form for examination in the United States Patent and Trademark Office.

An Abstract has been provided on a separate sheet numbered 29.

Favorable consideration is requested.

Respectfully submitted,

Daniel S. Ortiz

Daniel S. Ortiz
(Reg. No. 25,123)
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610-278-4934

Henkel Corporation
Law Department
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Gulph Mills, PA 19406

DSO/mlc
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EXHIBIT 2

Acknowledgement Receipt

The USPTO has received your submission at **11:42:21** Eastern Time on **05-OCT-2006** by Deposit Account: 011250.

$ **1200** fee paid by e-Filer via *RAM* with Confirmation Number: 654.

You have also pre-authorized the following payments from your USPTO Deposit Account:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 and 1.17

eFiled Application Information

EFS ID	1237118
Application Number	10685613
Confirmation Number	5097
Title	FILLER-CONTAINING POLYMER DISPERSION, METHOD FOR ITS PRODUCTION AND USE
First Named Inventor	Roberto Pavez Aranguiz
Customer Number or Correspondence Address	423
Filed By	Glenn E. Murphy/Iris Grogins
Attorney Docket Number	H 3680A US
Filing Date	15-OCT-2003
Receipt Date	05-OCT-2006
Application Type	Utility

Application Details

Submitted Files	Page Count	Document Description	File Size	Warnings
H3680Agentrans.pdf	1	Transmittal letter	110181 bytes	◈ PASS
H3680Aamd.pdf	12		471980 bytes	◈ PASS

Document Description	Page Start	Page End
Amendment - After Non-Final Rejection	1	1
Claims	2	8
Applicant Arguments/Remarks Made in an Amendment	9	12

H3680Aext.pdf	1	Extension of Time	73819 bytes	◈ PASS
H3680aids.pdf	3	Information Disclosure Statement (IDS) Filed	180357 bytes	△ WARNINGS

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SilicaPowdersSpecs.pdf	4	NPL Documents	269734 bytes	◈ PASS
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TECOSIL.pdf	2	NPL Documents	85927 bytes	◈ PASS
fee-info.pdf	2	Fee Worksheet (PTO-875)	8348 bytes	◈ PASS

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

PATENT
Docket No. H 3680A US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Roberto Pavez Aranguiz	Grp./A.U.:	1713
Appl. No.:	10/685,613	Examiner:	William K. Chung
Filed:	October 15, 2003	Customer No.:	00423
Confirm. No.:	5097		
Title:	FILLER CONTAINING POLYMER DISPERSION, METHOD FOR ITS PRODUCTION AND USE		

CERTIFICATE OF ELECTRONIC TRANSMITTAL

I hereby certify that this correspondence is being electronically transmitted to the U.S. Patent and Trademark Office via EFS-Web on the date indicated below.

10/5/06
Date

/Iris M. Grogins/
Signature of Certifier

Iris M. Grogins
Typed or printed name of certifier

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AND REQUEST FOR EXTENSION OF TIME

Applicants respond to the non-final action mailed April 5, 2005 and ask for a three month extension of the shortened statutory period to reply. Amendments to the claims are reflected in the list of claims that begins on page 2. Remarks begin on page 9.

AMENDMENTS TO THE CLAIMS:

This list of claims replaces all prior versions and lists of claims.

1.-17. (canceled)

18. (currently amended) A filler-containing polymer dispersion, comprising water, particles of at least one filler selected from the group consisting of organic fillers, inorganic fillers and mixtures thereof, at least one water-soluble organic polymer with a molecular weight of more than 600 and an HLB value of at least 15, and particles of at least one synthetic organic polymer, polymerized in the presence of at least one type of the filler particles, wherein the dispersion has a ratio of ~~a~~ filler particle size ~~of the filler particles~~ to ~~a~~ synthetic organic polymer particle size of ~~a polymer particles is in the range from~~ 1.1:1 to 20:1.

19. (currently amended) The filler-containing polymer dispersion as claimed in claim 18 wherein the synthetic organic polymer particles have a diameter (d50) of 0.03 to 0.5 µm.

20. (previously presented) The filler-containing polymer dispersion as claimed in claim 18, wherein the inorganic filler comprises a member selected from the group consisting of chalk ($CaCO_3$), gypsum ($CaSO_4$) as anhydrite, hemihydrate or dihydrate, silica flour, silica gel, titanium dioxide, talcum, a layer silicate, barium sulfate,

EXHIBIT 3

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,613	10/15/2003	Roberto Pavez Aranguiz	H 3680A US	5097

423 7590 11/16/2007
HENKEL CORPORATION
1001 TROUT BROOK CROSSING
ROCKY HILL, CT 06067

EXAMINER	
CHEUNG, WILLIAM K	

ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
11/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/685,613	PAVEZ ARANGUIZ, ROBERTO	
	Examiner	Art Unit	
	William K. Cheung	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 August 2007*.
2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18-39* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *18-39* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☒ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The examiner acknowledges the receipt of the argument filed August 29, 2007. Claims 18-39 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

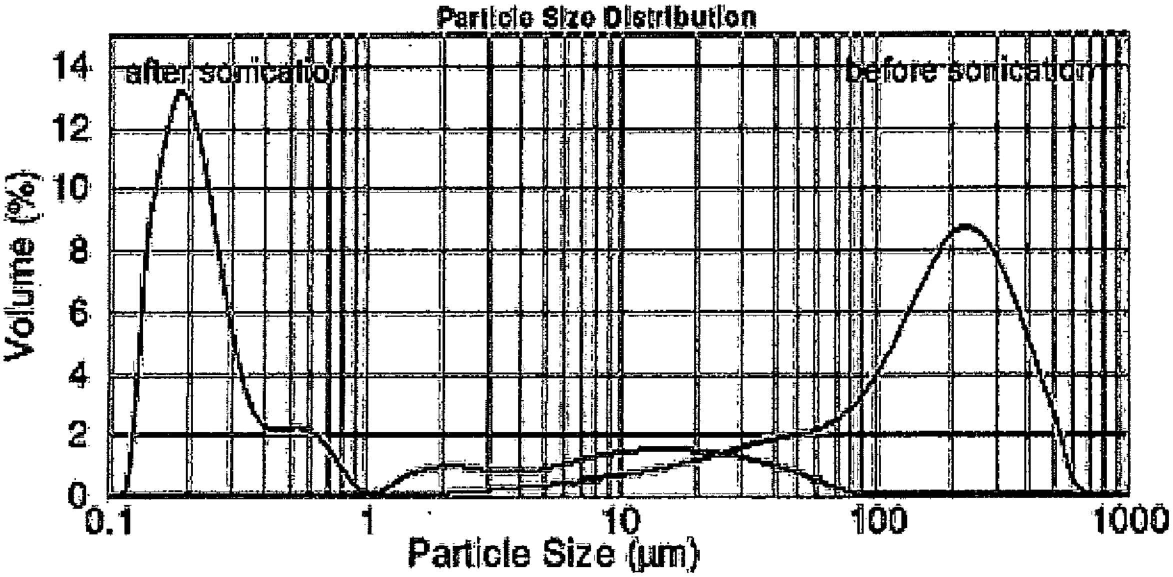
3. Claims 18-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamiyama et al. (US 6,140,394) for the reasons adequately set forth from paragraph 3 of the final rejection of May 15, 2007, as affirmed in a product literature of Hielscher – Ultrasound Technology, (http://www.hielscher.com /ultrasonics/size_reduction_silica_01.htm).

Applicant's arguments filed August 29, 2007, have been fully considered but they are not persuasive.

Applicants continue to argue that the inherency that the examiner made in the rejection of claims 18-39 is improper because the claimed "ratio of filler particle size to synthetic organic polymer particle size of 1.1:1 to 20:1" is not explicitly disclosed in Kamiyama et al. However, the examiner disagrees. In view of MPEP 2144, applicants must recognize that the rationale to modify or combine the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). See also In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (setting forth test for implicit teachings); In re Eli Lilly & Co., 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) (discussion of reliance on legal precedent); In re Nilssen, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988) (references do not have to explicitly suggest combining teachings); Ex parte Clapp, 227 USPQ 972 (Bd. Pat. App. & Inter. 1985) (examiner must present convincing line of reasoning supporting rejection); and Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993) (reliance on logic and sound scientific reasoning).

Applicants must recognize that the silica powder (col. 6, line 43-45) and polymer particle (col. 1, line 15-16; col. 6, line 11-12, 15) as taught in Kamiyama et al. clearly have sizes that are measurable in micron size ranges, it would not be difficult to one of ordinary skill in art that there is a ratio exist between the two filler materials or other ingredients. As affirmed in a product literature of Hielscher – Ultrasound Technology, standard silica can have particle sizes range from 2 microns to 600 microns, with median particle size of about 250 microns. Therefore, the examiner has a reasonable basis to maintain that the particle size rationale set forth for the rejection by the examiner is proper.

Product literature of Hielscher – Ultrasound Technology (page 2)



Starting (green curve) at an agglomerate particle size of more than 200 micron (D50) most of the particles were reduced to less than 200 nanometers. The obvious tailing to the right, results from the material composition (agglomerates and larger primaries). While the agglomerates are reduces easily, it takes longer processing to grind down larger primary particles.

Because the particle size teachings in Kamiyama et al. clearly fully encompass the range of ratio as claimed, the examiner has a reasonable basis that the claimed ratio is inherently possessed in Kamiyama et al. Regarding applicants' argument that an inherency must be a necessary result, not merely a possible results, applicants fail to recognize that the instant issue is that the range scope as taught in Kamiyama et al. definitely fully encompass the ratio range as claimed. Applicants must recognize that the instantly claimed invention is not dealing with a process which may or may not produce a specific product by chance.

Regarding applicants' argument that the word "encompass" is misleading and imprecise, applicants must recognize that word "encompass" is clearly defined in a dictionary.

Regarding applicants' argument that it is misleading to refer to "applicants that "powder" can be extended to encompass particle sizes that are above and below 200 microns, applicants must recognize that the argued "powder" are particles having definitive dimension and can be measured in micron sizes, as affirmed by the product literature and Figure of Hielscher-Ultrasound Technology. Therefore, the examiner has a reasonable basis not to ignore the "powder" teachings in Kamiyama et al.

In view of the reasons set forth above, the rejection set forth for Claims 18-39 is proper.

Conclusion

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

William K. Cheung, Ph. D.

Primary Examiner

November 2, 2007

WILLIAM K. CHEUNG
PRIMARY EXAMINER

Notice of References Cited	Application/Control No. 10/685,613	Applicant(s)/Patent Under Reexamination PAVEZ ARANGUIZ, ROBERTO
	Examiner William K. Cheung	Art Unit 1796 — Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-			
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Product literature by hielscher ultrasonics gmbh, warthestrasse 21, 14513 teltow, germany, © copyright 1999-2006. http://www.hielscher.com/ultrasonics/size_reduction_silica_01.htm
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Hielscher - Ultrasound Technology

home company products processes contact search

processes: lab use dispersing milling emulsifying sonochemistry nano-sizing biodiesel wire cleaning more...

Ultrasonic Dispersing of Silica (SiO2)

Silica is used in various industries for its abrasion resistance, electrical insulation and high thermal stability. Ultrasonic dispersing helps to use the potential of silica by improving the dispersion quality.

Silica Applications

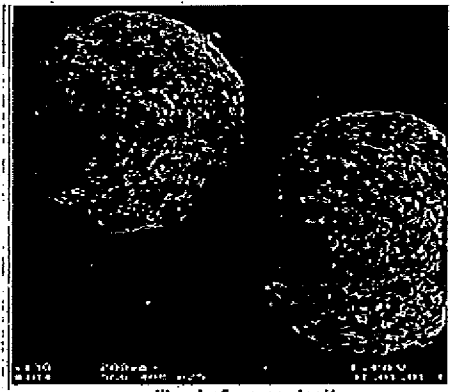
Silica (SiO_2) is a **multi-functional ceramic** material that is being used in **various industries** to improve surfaces and mechanical properties of diverse materials. It is used as a **filler, performance additive, rheological modifier** or **processing aid** in many product formulations, such as paints & coatings, plastics, synthetic rubber, adhesives, sealants, or insulation materials. In particular silica fume (amorphous silicon dioxide) or microsilica is being added to concrete in order to improve the **concrete strength** and durability. Silica fume is also being used in refractory concretes to reduce porosity and to enhance strength by improved particle packing.

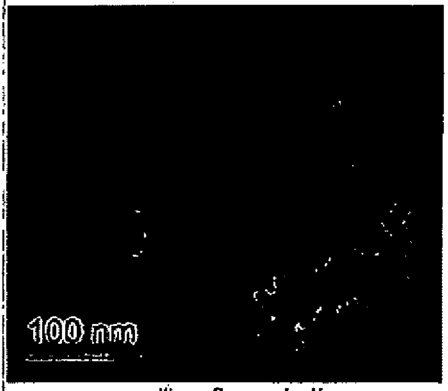
Silica Dispersion

Silica is available in a wide range of **hydrophilic** and **hydrophobic** forms and is typically used in **extremely fine particle size.** Typically silica is not well dispersed after wetting. It does also add a lot of microbubbles to the product formulation.

For most silica applications, a **good and uniform dispersion** is important. In particular when being used in coatings and lacquers to **improve scratch resistance**, the silica particles need to be small enough not to interfere with the visible light to **avoid haze and maintain transparency**. For most coatings silica need to be smaller than 40nm to fulfil this requirement. For other applications, particle agglomeration hinders each individual silica particle to interact with the surrounding media.

Ultrasonic processing has been proven to me **more effective in the dispersing of silica** than other high-shear mixing methods. The picture below shows a typical result of ultrasonic dispersing of fumed silica in water. The measurements were obtained using a Malvern Mastersizer 2000.


silica before sonication



silica after sonication

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enter keywords (e.g. UP100H, cutting, ...)

Ask For More Information [n

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If you would like to receive more information please enter your contact details above and pr [>>].

Ultrasonication of Biodiesel [n

ultrasonics in the conversion of oil (SOV/WVO) to biodiesel improves processing time and biodiesel yield

Dispersion of Nanomaterials [n

ultrasonic dispersion of nanoparticles a nanotubes in lab scale and in producti scale

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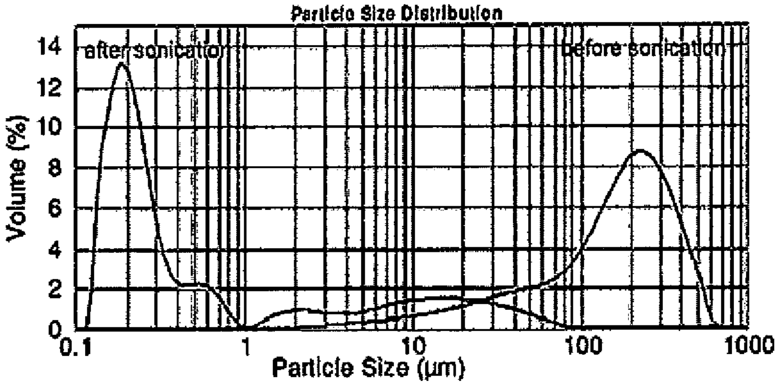
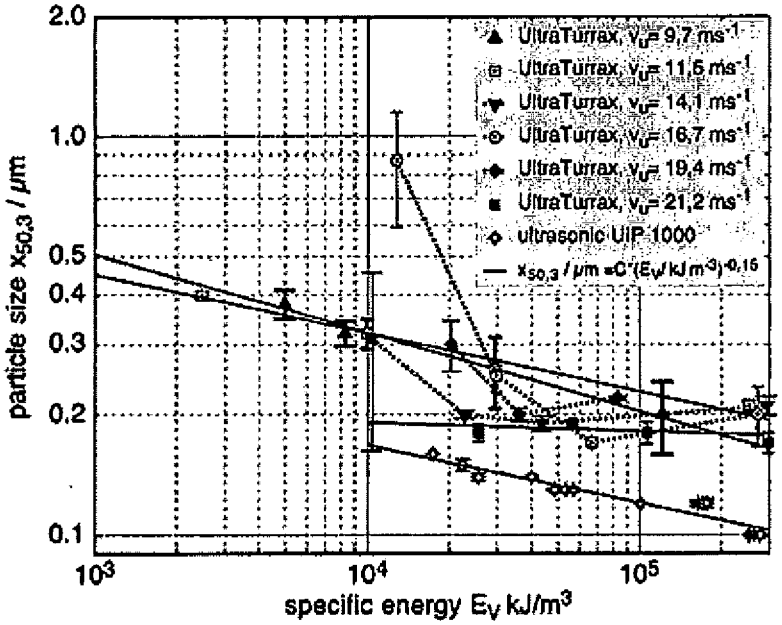


Starting (green curve) at an agglomerate particle size of more than 200 micron (D50) most of the particles were reduced to less than 200 nanometers. The obvious tailing to the right, results from the material composition (agglomerates and larger primaries). While the agglomerates are reduces easily, it takes longer processing to grind down larger primary particles.

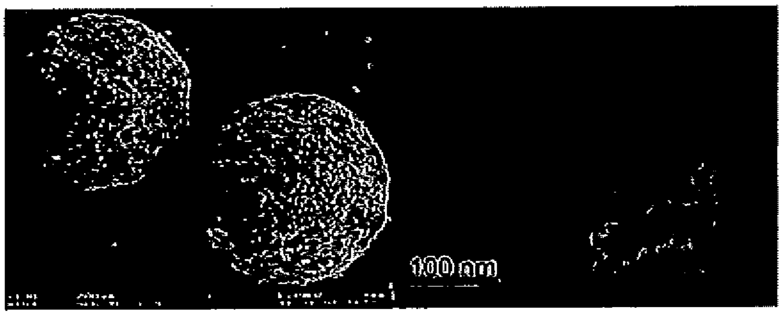
Processing Efficiency in Silica Size Reduction

The processing efficiency of ultrasound in the dispersing of silica was compared with other high-shear mixing methods, such as an IKA Ultra-Turrax by Pohl and Schubert. Pohl compared the particle size reduction of Aerosil 90 (2%wt) in water using an Ultra-Turrax (rotor-stator-system) at various settings with that of an UIP1000 (ultrasonic device) in continuous mode. The graphic below shows the results.



As a result of his study Pohl concluded, that *"At constant specific energy E_V* ***ultrasound is more effective than the rotor-stator-system.****"* and that *"The applied ultrasound frequency in the range from 20 kHz up to 30 kHz has no major effect on the dispersion process."*

The pictures below show the results that Pohl obtained sonicating spray freeze silica granules. (Click at the images for larger views!)



(left: before sonication, right: after sonication)

Request more Information!

Please use the form below, if you wish to request additional information regarding the use of ultrasound in dispersing silica. We will be glad to offer you an ultrasonic system meeting your requirements.

name*, surname
company
email*
telephone, fax*
street, no.
state, ZIP, city*
country*
comment

concentration:
liquid phase: e.g. aqueous
flow rate:
temperature:

Send

Literature

- **Markus Pohl, Helmar Schubert (2004):** Dispersion and deagglomeration of nanoparticles in aqueous solutions, 2004 Partec

previous page | next page

16kW Industrial Ultrasound [more]
New UIP16000 (16kW) for the industrial sonication of liquids, such as dispersing or homogenizing.

Special Offer: UIP1000 Set [more]
UIP1000 set: 1,000 watts for ultrasonic liquid processes, e.g. dispersing

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imprint, © copyright 1999-2006, by hielscher ultrasonics gmbh, warthestrasse 21, 14513 teltow, germany

Index of Claims	**Application/Control No.** 10/685,613	**Applicant(s)/Patent under Reexamination** PAVEZ ARANGUIZ, ROBERTO
	Examiner William K. Cheung	**Art Unit** 1796

√	**Rejected**	–	**(Through numeral) Cancelled**	**N**	**Non-Elected**	**A**	**Appeal**
=	**Allowed**	**÷**	**Restricted**	**I**	**Interference**	**O**	**Objected**

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EXHIBIT 4

Acknowledgement Receipt

The USPTO has received your submission at **13:31:33** Eastern Time on **15-JAN-2008** .

No fees have been paid for this submission. Please remember to pay any required fees on time to prevent abandonment of your application.

eFiled Application Information

EFS ID	2717604
Application Number	10685613
Confirmation Number	5097
Title	FILLER-CONTAINING POLYMER DISPERSION, METHOD FOR ITS PRODUCTION AND USE
First Named Inventor	Roberto Pavez Aranguiz
Customer Number or Correspondence Address	423
Filed By	James E. Piotrowski
Attorney Docket Number	H 3680A US
Filing Date	15-OCT-2003
Receipt Date	15-JAN-2008
Application Type	Utility under 35 USC 111 (a)

Application Details

Submitted Files	Page Count	Document Description	File Size	Warnings
H3680A_Response.pdf	8	Amendment After Final	433662 bytes	◈ PASS

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

If you need help:

- *Call the Patent Electronic Business Center at (866) 217-9197 (toll free) or e-mail EBC@uspto.gov for specific questions about Patent e-Filing.*
- *Send general questions about USPTO programs to the USPTO Contact Center (UCC) .*
- *If you experience technical difficulties or problems with this application, please report them via e-mail to Electronic Business Support or call 1 800-786-9199.*

Response Under 37 CFR 1.116 (After Final)
Expedited Procedure
Examining Group 1796

Atty. Docket: H 3680 A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:
Roberto Pavez Aranguiz

Application No.:	10/685,613	Examiner:	CHEUNG, William K.
Filing Date:	10/15/2003	Group Art Unit:	1796
		Confirmation No.:	5097

For: Filler Containing Polymer Dispersion, Method for its Production and its Use

To: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

RESPONSE AFTER FINAL OFFICE COMMUNICATION (AMENDMENT UNDER RULE 116)

Sir:

Applicants respectfully request reconsideration of the objections and rejections in the Office communication mailed on November 16, 2007 in view of the following remarks.

There are no amendments to the specification or claims.

REMARKS

No claims are being added, cancelled or amended. Claims 18-39 are pending in the application.

This amendment is being filed under 37 C.F.R. 1.116 governing amendment after final rejection. This amendment is appropriate for entry under Rule 1.116 since it does not raise new issues and places the application in allowable condition and/or places the application in better form for consideration of appeal.

The rejection of claims 18-39 under 35 U.S.C. §102(e).

Claims 18 to 39 were rejected under 35 U.S.C. §102(e) as having each and every feature and interrelationship anticipated by U.S. Patent No. 6,140,394 to Kamiyama et al. Anticipation requires that each element and interrelationship recited in a claim be disclosed explicitly or inherently in a single piece of prior art.

- **The Kamiyama reference does not explicitly anticipate Applicants' claims 18-24, 34 and 36-39.**

Pending claim 18 recites in one pertinent part: ". . . wherein the dispersion has a ratio of filler particle size to synthetic organic polymer particle size of 1.1:1 to 20:1." Claims 19-24, 34 and 36-39 depend directly or indirectly from claim 18.

The Kamiyama reference fails to explicitly disclose either filler particle size or Applicant's claimed ratio of filler particle size to polymer particle size. Thus, the Kamiyama reference can not explicitly anticipate claims 18-24, 34 and 36-39.

- **The Kamiyama reference does not inherently anticipate Applicants' claims 18 to 24, 34 and 36-39.**

The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. §§102 or 103. See MPEP §2112. However, "[t]he doctrine of inherency is available only when the prior inherent event can be established as a certainty. That an event may result from a given set of circumstances is not sufficient to establish anticipation. Probabilities are not sufficient . .

. A prior inherent event cannot be established based upon speculation . . ." Ethyl Molded Products Co. v. Betts Package Inc., 9 USPQ2d 1001, 1032-1033 (E.D. Ky. 1988). The Court of Appeals for the Federal Circuit has reinforced this position stating: "[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." In re Rijckaert, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). To rely on the theory of inherency in rejecting a claim under 35 U.S.C. §§102 or 103, ". . . the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Further, the chemical arts are known to be unpredictable so that a person of ordinary skill is cautious about extrapolating from teachings within those arts. See, for example, In re Marzocchi, 169 USPQ 367, 368-370 (CCPA 1971), acknowledging the unpredictability within the chemical arts. This caution in extrapolating from chemical teachings is especially true when, as in the present case, the Kamiyama reference does not disclose any filler particle size, any reason to use a particular filler particle size, any necessary or useful ratio of filler particle size to polymer particle size or any reason to use a particular ratio of filler particle size to polymer particle size.

- **The Examiner's assertions provide a huge range of ratios for filler particle size to polymer particle size.**

The Examiner asserts:

> Applicants must recognize that the silica powder (col. 6, line 43-45) and polymer particle (col. 1, line 15-16; col. 6, line 11-12, 15) as taught in Kamiyama et al. clearly have sizes that are measurable in micron size ranges, it would not be difficult to one of ordinary skill in art that there is a ratio exist between the two filler materials or other ingredients.

Applicant agrees that the Kamiyama reference discloses polymer particle sizes within the range of 2 to 3 micrometers to 30 micrometers. See Kamiyama, column 6, lines 11-15. Applicant agrees that the product literature cited by the Examiner illustrates that silica powder can have a particle size of 0.2 micrometers to 600 micrometers. Using the polymer particle sizes of the Kamiyama reference and the silica particle sizes asserted by the Examiner it is theoretically possible to have a ratio of filler particle size to polymer particle size ranging from 0.2/30 or 0.0067:1 to 600/2 or 300:1. Thus, the Examiner's assertions provide a theoretically possible range of ratios for filler particle size to polymer particle size spanning almost five (5) orders of magnitude!

- **The Kamiyama reference does NOT disclose any reason to narrow the Examiner's huge range of ratios for filler particle size to polymer particle size.**

- The Kamiyama reference does NOT describe any particle size for the filler particles.
- The Kamiyama reference does NOT describe any reason to use a particular filler particle size.
- The Kamiyama reference does NOT disclose any particular ratio of filler particle size to polymer particle size.
- The Kamiyama reference does NOT disclose any reason to use a particular range for ratio of filler particle size to polymer particle size.

- **Applicant's claim only a very narrow range of ratios for filler particle size to polymer particle size.**

Pending claim 18 recites in one pertinent part: ". . . wherein the dispersion has a ratio of filler particle size to synthetic organic polymer particle size of 1.1:1 to 20:1."

- **It is more probable that the Kamiyama ratio for filler particle size to polymer particle size falls outside of Applicant's claimed range than within Applicant's claimed range.**

Applicant concedes that a ratio of filler particle size to polymer particle size must exist in the Kamiyama reference. However, it is simply not possible to discern that ratio from the Kamiyama reference because, in contrast to its description of the polymer particles, *it never provides any size for the filler particles!* The fact that the filler particle size *can* be measured does not change the fact that *it never was measured.*

Given the Examiner's huge, theoretically possible range of ratios for filler particle size to polymer particle size (0.0067:1 to 300:1) why **MUST** the Kamiyama material have a ratio of filler particle size to polymer particle size of 1.1:1 to 20:1 as claimed by Applicant? In fact, given the Examiner's huge, theoretically possible range of ratios for filler particle size to polymer particle size (0.0067:1 to 300:1) it appears statistically more probable that the Kamiyama ratio falls outside of Applicant's narrow ratio range than within Applicant's narrow ratio range.

The doctrine of inherency is available only when the prior inherent event can be established as a certainty. That an event may result from a given set of circumstances is not sufficient to establish anticipation. Probabilities are not sufficient to establish inherency. Following the teachings of the Kamiyama reference cannot inevitably lead to Applicant's claimed ratio of filler particle size to polymer particle size. In fact, it appears more probable that the Kamiyama ratio will be different that Applicant's claimed narrow ratio. This rejection is traversed. If the Examiner maintains this rejection he must explain why the Kamiyama reference NECESSARILY discloses a ratio of filler particle size to polymer particle size of 1.1:1 to 20:1 in view of the huge range of such ratios that the Examiner admits are theoretically possible. Applicant's pending claims 18-24, 34 and 36-39 are not anticipated by the Kamiyama reference and are patentable for at least this reason.

- **The Kamiyama reference does NOT teach the polymer particle diameter (d50) recited in claim 19.**

Claim 19 recites in one pertinent part: ". . . wherein the synthetic organic polymer particles have a diameter (d50) of 0.03 to 0.5 µm."

The Kamiyama reference discloses minimum (not d50) polymer particle sizes of 5 µm (column 1, line 15) and "as small as 2 to 3 µm" (column 6, lines 11-15). The figures of Kamiyama teach a median polymer particle diameter of 5 µm or more. The Kamiyama reference does NOT teach the use of synthetic organic polymer particles having a diameter (d50) of 0.03 to 0.5 µm. Applicant's pending claim 19 is not anticipated by the Kamiyama reference and is patentable for at least this additional reason.

- **The Kamiyama reference does not explicitly anticipate Applicants' claims 25-33 and 35.**

Anticipation requires that each element and interrelationship recited in a claim be disclosed explicitly or inherently in a single piece of prior art. Pending claim 25 recites in one pertinent part: ". . . containing filler particles . . . with a particle size (d50) of 0.01 to 0.5 μm . . ." Claims 26-33 and 35 depend directly or indirectly from claim 25.

The Kamiyama reference fails to explicitly disclose ANY filler particle size. Thus, the Kamiyama reference can not explicitly anticipate claims 25-33 and 35.

- **The Kamiyama reference does not inherently anticipate Applicants' claims 25-33 and 35.**
  - **The Examiner's assertions provide a huge range of filler particle sizes.**

The Examiner asserts:

> Applicants must recognize that the silica powder (col. 6, line 43-45) and polymer particle (col. 1, line 15-16; col. 6, line 11-12, 15) as taught in Kamiyama et al. clearly have sizes that are measurable in micron size ranges, it would not be difficult to one of ordinary skill in art that there is a ratio exist between the two filler materials or other ingredients.

Applicant agrees that the product literature cited by the Examiner illustrates silica powder can have a huge range of particle sizes from 0.2 micrometers to 600 micrometers.

  - **The Kamiyama reference does NOT disclose any reason to narrow the Examiner's huge range of filler particle sizes.**

- The Kamiyama reference does NOT describe any particle size for the filler particles.
- The Kamiyama reference does NOT describe any reason to use a particular filler particle size.
- The Kamiyama reference does NOT disclose any particular ratio of filler particle size to polymer particle size.
- The Kamiyama reference does NOT disclose any reason to use a particular range for ratio of filler particle size to polymer particle size.

- **Applicant's claim only a very narrow range of filler particle sizes.**

Pending claim 25 recites in one pertinent part: ". . . containing filler particles . . . with a particle size (d50) of 0.01 to 0.5 µm . . ."

- **It is more probable that the Kamiyama filler particle size falls outside of Applicant's claimed range than within Applicant's claimed range.**

Applicant concedes that a filler particle size must exist in the Kamiyama reference. However, it is simply not possible to discern any such size from the Kamiyama reference because, in contrast to its description of the polymer particles, *it never provides any size for the filler particles!* The fact that the filler particle size *can* be measured does not change the fact that *it never was measured.*

Given the Examiner's huge, range of filler particle sizes (0.2µm to 600 µm) why MUST the Kamiyama material have a filler particle size (d50) of 0.01 µm to 0.5 µm as claimed by Applicant? In fact, given the Examiner's huge, range of filler particle sizes it appears statistically more probable that the Kamiyama filler particle size falls outside of Applicant's narrow filler particle size range than within Applicant's narrow filler particle size range.

The doctrine of inherency is available only when the prior inherent event can be established as a certainty. That an event may result from a given set of circumstances is not sufficient to establish anticipation. Probabilities are not sufficient to establish inherency. Following the teachings of the Kamiyama reference cannot inevitably lead to Applicant's claimed filler particle size range. In fact, it appears more probable that the Kamiyama filler particle size will be different that Applicant's narrow filler particle size range. This rejection is traversed. If the Examiner maintains this rejection he must explain why the Kamiyama reference NECESSARILY discloses a filler particle size (d50) of 0.01 µm to 0.5 µm in view of the huge range of filler particle sizes admitted to be present by the Examiner. Applicant's pending claims 25-33 and 35 are not anticipated by the Kamiyama reference and are patentable for at least this reason.

In summary, Applicants have addressed each of the objections and rejections within the present Office Action. It is believed the application now stands in condition for allowance, and prompt favorable action thereon is respectfully solicited. The Examiner is invited to telephone Applicants' attorney at 860 571 2501 if it is deemed that a telephone conversation will hasten prosecution of this application.

Respectfully submitted,

Roberto Pavez Aranguiz

Date: 1-15-2008

By:
James E. Piotrowski
Registration No. 43,860
Attorney for Applicant

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Legal Department
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860.571.5028 (Fax)

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EXHIBIT 5

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,613	10/15/2003	Roberto Pavez Aranguiz	H 3680A US	5097

423 7590 02/13/2008
HENKEL CORPORATION
1001 TROUT BROOK CROSSING
ROCKY HILL, CT 06067

EXAMINER	
CHEUNG, WILLIAM K	
ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
02/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** *10/685,613*	**Applicant(s)** PAVEZ ARANGUIZ, ROBERTO
	Examiner WILLIAM K. CHEUNG	**Art Unit** 1796

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 15 January 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires *3* months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: *none*.
   Claim(s) objected to: *none*.
   Claim(s) rejected: *18-39*.
   Claim(s) withdrawn from consideration: *none*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/William K Cheung/
Primary Examiner, Art Unit 1796
February 7, 2008

Continuation of 11. does NOT place the application in condition for allowance because: Regarding applicants' argument that the rejection set forth by the examiner is based on "a theoretically possible range of ratios for filler particles size to polymer particle size spanning almost five orders of magnitude", the examiner is unclear on how the "five orders of magnitude" rationale is arrived. Further, applicants must recognize that the reasons set forth for the rejection is not based on theory (or theoretically based), but on teachings from the prior art of Kamiyama et al. Although the teachings of the particle size range is broad, the taught particle size range still fully encompasses the particle size range as claimed. Regarding applicants' argument that Kamiyama et al. do not disclose any reason to narrow the disclosed range to obtain the claimed range, applicants must recognize that the particle size range as taught in Kamiyama et al. fully embraces all particle size and ratio ranges that meet the particle size ratio as claimed. Regarding applicants' argument that Kamiyama et al. do not disclose the features of claims 19, 25-33, which requires the synthetic organic polymer particles to have a diameter (d50) of 0.03 to 0.5 micron, applicants must recognize that Kamiyama et al. (col. 12-13, claim 1) clearly claim an invention having an inventive scope that fully encompasses organic polymer particles of all sizes, as long as the size is within the claimed "desired size". Further, applicants must recognize that Kamiyama et al. (col. 1, line32-42) clearly disclose organic polymer particiles having a particle size of 1 micron maximum, which implies particle size distribution having a (d50) of less than 0.5 micron. In such disclosure, the examiner has a reasonable basis that the taught organic polymer particles having a particle size of one micron maximum have been prepared. Applicants must recognize that the claimed invention is polymer product, not a process invention. Therefore, claims 18-39 stand rejected for the reasons adequately set forth from the final rejection of November 16, 2007.

EXHIBIT 6

Atty. Docket: H 3680 A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of: Roberto Pavez Aranguiz

Application No.:	10/685,613	Examiner:	CHEUNG, William K.
Filing Date:	10/15/2003	Group Art Unit:	1796
		Confirmation No.:	5097

For: Filler Containing Polymer Dispersion, Method for its Production and its Use

To: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Sir,

INTERVIEWS SUMMARY RECORD

Date of interview:
March 20, 2008

Type of interview:
telephonic

Participants:
1) Examiner William K. Cheung
2) James E. Piotrowski

Exhibit shown or demonstration conducted:
no

Claims discussed:
19

Identification of prior art discussed:
U.S. Patent No. 6,140,394 and product literature of Hielscher from page 5 of the November 16, 2007 Office communication.

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Mr. Piotrowski pointed out that claim 19 is directed to polymer particles having a d50 diameter of 0.03 to 0.5 µm. Mr. Piotrowski pointed out that the method disclosed in the '394 patent limits those polymer particles to larger sizes.

Examiner Cheung pointed to the graph on page 5 of the November 16, 2007 Office communication and asserted that this graph disclosed polymer particles in the size range of claim 19. Mr. Piotrowski pointed out that page 4 of the November 16, 2007 Office communication explained that the graph on page 5 was for silica particles and not for polymer particles.

Examiner Cheung suggested filing an after final response with no claim amendments directed to the claim 19 rejection.

Date of Interview:
April 17, 2008

Participants:
1) Examiner William K. Cheung
2) James Piotrowski

Type of interview:
telephonic

Exhibit shown or demonstration conducted:
no

Claims discussed:
19

Identification of prior art discussed:
prior art of record

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Examiner Cheung and Mr. Piotrowski discussed the status of claim 19 as shown in the April 10, 2008 Advisory Action.

Date of Interview:
April 22, 2008

Participants:
1) Supervisor David Wu
2) James Piotrowski

Type of interview:
telephonic

Exhibit shown or demonstration conducted:
no

Claims discussed:
19

Identification of prior art discussed:
prior art of record

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Supervisor Wu and Mr. Piotrowski discussed the status of claim 19 as shown in the April 10, 2008 Advisory Action.

Date of Interview:
April 23, 2008

Participants:
1) Examiner William K. Cheung
2) James Piotrowski

Type of interview:
telephonic

Exhibit shown or demonstration conducted:
no

Claims discussed:
19

Identification of prior art discussed:
prior art of record

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Examiner Cheung and Mr. Piotrowski discussed the status of claim 19 as shown in the April 10, 2008 Advisory Action. Mr. Piotrowski agreed to file a third Rule 116 response amending claim 19 to independent claim status.

Respectfully submitted,

Date: April 24, 2008

By:

James E. Piotrowski
Registration No. 43,860
Attorney for Applicant

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1001 Trout Brook Crossing
Rocky Hill, CT 06067
860.571.2501 (Office)
860.571.5028 (Fax)

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EXHIBIT 7

Acknowledgement Receipt

The USPTO has received your submission at **16:51:10** Eastern Time on **25-MAR-2008** .

No fees have been paid for this submission. Please remember to pay any required fees on time to prevent abandonment of your application.

eFiled Application Information

EFS ID	3049770
Application Number	10685613
Confirmation Number	5097
Title	FILLER-CONTAINING POLYMER DISPERSION, METHOD FOR ITS PRODUCTION AND USE
First Named Inventor	Roberto Pavez Aranguiz
Customer Number or Correspondence Address	423
Filed By	James E. Piotrowski
Attorney Docket Number	H 3680A US
Filing Date	15-OCT-2003
Receipt Date	25-MAR-2008
Application Type	Utility under 35 USC 111 (a)

Application Details

Submitted Files	Page Count	Document Description	File Size	Warnings
0308_2nd_116response_asfiled.pdf	8	Amendment After Final	393582 bytes	◈ PASS

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this

Response Under 37 CFR 1.116 (After Final)
Expedited Procedure
Examining Group 1796

Atty. Docket: H 3680 A US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:
Roberto Pavez Aranguiz

Application No.:	10/685,613	Examiner:	CHEUNG, William K.
Filing Date:	10/15/2003	Group Art Unit:	1796
		Confirmation No.:	5097

For: Filler Containing Polymer Dispersion, Method for its Production and its Use

To: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

SECOND RESPONSE AFTER FINAL OFFICE COMMUNICATION (AMENDMENT UNDER RULE 116) and EXAMINER INTERVIEW SUMMARY

Sir:

Applicants respectfully request reconsideration of the objections and rejections in the Office communication mailed on November 16, 2007 in view of the following remarks.

There are no amendments to the specification or claims.

REMARKS

No claims are being added, cancelled or amended. Claims 18-39 are pending in the application.

This amendment is being filed under 37 C.F.R. 1.116 governing amendment after final rejection. This amendment is appropriate for entry under Rule 1.116 since it does not raise new issues and places the application in allowable condition and/or places the application in better form for consideration of appeal.

Applicants' representative thanks Examiner Cheung for his time and courtesy in the telephone conference of March 20, 2008.

The rejection of claims 19 under 35 U.S.C. §102(e).

Claim 19 was rejected under 35 U.S.C. §102(e) as having each and every feature and interrelationship anticipated by U.S. Patent No. 6,140,394 to Kamiyama et al. Anticipation requires that each element and interrelationship recited in a claim be disclosed explicitly or inherently in a single piece of prior art.

- **The Kamiyama document does NOT teach the features recited in claim 19.**

Claim 19 recites: "The filler containing polymer dispersion as claimed in claim 18, wherein the synthetic organic polymer particles have a diameter (d50) of 0.03 to 0.5 µm." Thus, claim 19 focuses on the polymer particle diameter. Claim 19 directly depends from claim 18 and also includes each element and interrelationship of claim 18.

The Kamiyama document includes a background section and a disclosure section.

- The Kamiyama disclosure section does NOT teach the features recited in claim 19.

The Kamiyama method is limited to suspension polymerization. See column 1, lines 13-16 and column 2, lines 36-38.

The Kamiyama suspension polymerization method can produce polymer particles having a size of 5-50 µm (column 1, line 15) and "as small as 2 to 3 µm" (column 6, lines 11-15). The figures of Kamiyama teach a median polymer particle diameter of 5 µm or more. The Kamiyama document does NOT teach that the suspension polymerization method therein can produce synthetic organic polymer particles having a diameter (d50) of 0.03 to 0.5 µm.

In the February 13, 2008 Advisory Action the Examiner stated: ". . . applicants must recognize that Kamiyama et al (col.12-13, claim 1) clearly claim an invention having an inventive scope that fully encompasses organic polymer particles of all sizes, as long as the size is within the claimed 'desired size'."

Claim 1 of the Kamiyama document recites:

> 1. A method of suspension polymerization of a monomeric composition to produce uniformly sized particles having a narrow distribution, which method comprises the steps of: . . . (f) completing a polymerization reaction to produce uniformly sized particles having a narrow distribution.

Claim 1 does not recite any polymer particle range. However, as discussed above the Kamiyama method and claims are limited to suspension polymerization. The Kamiyama suspension polymerization method can only provide polymer particles having a size of 5-50 µm (column 1, line 15) and "as small as 2 to 3 µm" (column 6, lines 11-15). The Kamiyama document does NOT teach or suggest that the suspension polymerization method therein can produce synthetic organic polymer particles having a diameter (d50) of 0.03 to 0.5 µm. The Kamiyama document can not be enabled prior art for synthetic organic polymer particles having a diameter (d50) of 0.03 to 0.5 µm. Any interpretation of claim 1 must be tempered by the limited enabling disclosure of the Kamiyama specification.

- The Kamiyama background section does NOT teach the features recited in claim 19.

In the February 13, 2008 Advisory Action the Examiner went on to state: "Further, applicants must recognize that Kamiyama et al. (col. 1, line 32-42) clearly discloses organic polymer particles having a particle size of 1 micron maximum which implies particle size distribution having a (d50) of less than 0.5 micron."

The Kamiyama document at column 1, lines 17 - 45 states, with underlining added:

> 2. Background of Related Art
>
> The importance of powder making technology which takes advantage of the various functions of particles per se is increasingly recognized these days. Among the particles produced by this technology are gap retainers, slip imparting agents, functional carriers, monodispersed particles having surface activity, standard particles, toners, and functional fillers that control the fluidity and gloss characteristics of paints. In order to produce these particles by polymerization, emulsion polymerization is used most commonly today. In speciality applications, other methods of polymerization are employed, such as soap-free polymerization, dispersion polymerization, seed polymerization and swelling polymerization.
>
> However, these methods of polymerization have several defects. For example, considerable difficulty is involved in removing non-negligible impurities such as emulsifiers. Second, the size of particles that can be produced is limited. Third, the production cost is exorbitant. Fourth, these methods are too complex to be suitable for large-scale production. Particles having a narrow size distribution are in most cases produced by emulsion polymerization but the size of particles that can be produced by this method is only about 1 μm at maximum and producing larger particles is extremely difficult.
>
> Suspension polymerization is also capable of producing particles, however the only products obtained so far are nonuniform in particle size and have a broad particle size distribution. Since particle size and size distribution are closely related to the performance of polymer products in such aspects as mechanical strength, chemical resistance, color, transparency and moldability, improvements in those factors are desired.

The cited text does not discuss the Kamiyama method or material; rather it discusses only the technological background of polymer particle production. The particular size mentioned by the Examiner in the rejection is limited to emulsion polymerization. See underlined text.

The cited background text does not teach or suggest all of the features of claim 19 such as those recited in parent claim 18. Thus, the cited column 1 text alone is not sufficient to reject claim 19 for anticipation.

The Kamiyama method and claims are limited to suspension polymerization. There is no teaching or suggestion in the Kamiyama document that suspension polymerization (Kamiyama method) and emulsion polymerization (column 1 background) are interchangeable. In fact, the Kamiyama background fairly distinguishes emulsion polymerization from other polymerization methods. There has been no assertion in an Office communication that suspension polymerization (Kamiyama method) and emulsion polymerization (column 1 background) are interchangeable.

Summarized:

- The Kamiyama method is limited to only suspension polymerization and can only provide polymer particles having a size of 5-50 µm and "as small as 2 to 3 µm".
- The column 1 text particle size is limited to only emulsion polymerization. The column 1 text does not disclose all of the features of Applicants' claims 18 and 19.
- There is no teaching or suggestion in the Kamiyama document that suspension polymerization (Kamiyama method) and emulsion polymerization (column 1 background) are interchangeable.
- There has been no assertion in an Office communication that suspension polymerization (Kamiyama method) and emulsion polymerization (column 1 background) are interchangeable.

Applicant's pending claim 19 is not anticipated by the Kamiyama document and is patentable for at least this reason.

- **The cited product literature does NOT teach the polymer particle diameter (d50) recited in claim 19.**

During the March 20, 2008 telephone conference the Examiner pointed to the page 5 graph of the November 16, 2007 Office communication as disclosing a polymer particle size.

The page 5 graph is labeled "Product literature of Hielscher - Ultrasound Technology (page 2). The Hielscher - Ultrasound Technology literature attached to the November 16, 2007 Office communication explicitly teaches that the page 5 graph is restricted to "Ultrasonic Dispersing of Silica (SiO2)". See page 1 of the product literature. Page 4 of that Office communication confirms that the page 5 graph refers only to silica, stating: "As affirmed in product literature of Hielscher - Ultrasound Technology, standard silica can have particle size ranges . . ."

The polymer particle size of Applicant's pending claim 19 is not anticipated by the Hielscher - Ultrasound Technology literature and is patentable for at least this reason.

In summary, Applicants have addressed the rejection of claim 19 within the present Office Action. It is believed that claim 19 is patentable and prompt favorable action thereon is respectfully solicited. The Examiner is invited to telephone Applicants' attorney at 860 571 2501 if it is deemed that a telephone conversation will hasten prosecution of this application.

Respectfully submitted,

Roberto Pavez Aranguiz

Date: March 25, 2008

By: /James E. Piotrowski
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EXHIBIT 8

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,613	10/15/2003	Roberto Pavez Aranguiz	H 3680A US	5097

423 7590 04/10/2008
HENKEL CORPORATION
1001 TROUT BROOK CROSSING
ROCKY HILL, CT 06067

EXAMINER	
CHEUNG, WILLIAM K	

ART UNIT	PAPER NUMBER
1796	

MAIL DATE	DELIVERY MODE
04/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action **Before the Filing of an Appeal Brief**	**Application No.** *10/685,613*	**Applicant(s)** PAVEZ ARANGUIZ, ROBERTO
	Examiner WILLIAM K. CHEUNG	**Art Unit** 1796

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 25 March 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: *none*.
   Claim(s) objected to: *19*.
   Claim(s) rejected: *18 and 20-39*.
   Claim(s) withdrawn from consideration: *none*.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/William K Cheung/
Primary Examiner, Art Unit 1796
April 7, 2008

Continuation of 11. does NOT place the application in condition for allowance because: In view of the argument filed March 25, 2008, the rejection of Claim 19 under 35 U.S.C. 102(e) as being anticipated by Kamiyama et al. (US 6,140,394) is withdrawn. However, the rejection of Claims 18, 20-39 under 35 U.S.C. 102(e) as being anticipated by Kamiyama et al. (US 6,140,394) is maintained for the reasons adequately set forth from the advisory action of February 13, 2008. Regarding the d50 argument, the argument is not supported by claims 18, 20-39 as written.

EXHIBIT 9

Response Under 37 CFR 1.116 (After Final)
Expedited Procedure
Examining Group 1796

Atty. Docket: H 3680 A US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:
Roberto Pavez Aranguiz

Application No.:	10/685,613	Examiner:	CHEUNG, William K.
Filing Date:	10/15/2003	Group Art Unit:	1796
		Confirmation No.:	5097

For: Filler Containing Polymer Dispersion, Method for its Production and its Use

To: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

THIRD RESPONSE AFTER FINAL OFFICE COMMUNICATION (AMENDMENT UNDER RULE 116) and EXAMINER INTERVIEW SUMMARY

Sir:

Applicants respectfully request reconsideration of the objection in the Office communication mailed on April 10, 2008 in view of the following remarks.

Amendment to the claims begins on page 2.

LISTING OF THE CLAIMS:

Kindly replace the previous claim set with the claim set which appears below.

1. to 17 (cancelled)

18. (previously presented) A filler-containing polymer dispersion, comprising water, particles of at least one filler selected from the group consisting of organic fillers, inorganic fillers and mixtures thereof, at least one water soluble organic polymer with a molecular weight of more than 600 and an HLB value of at least 15, and particles of at least one synthetic organic polymer, polymerized in the presence of at least one type of the filler particles, wherein the dispersion has a ratio of filler particle size to synthetic organic polymer particle size of 1.1:1 to 20:1.

19. (currently amended) A filler-containing polymer dispersion, comprising water, particles of at least one filler selected from the group consisting of organic fillers, inorganic fillers and mixtures thereof, at least one water soluble organic polymer with a molecular weight of more than 600 and an HLB value of at least 15, and particles of at least one synthetic organic polymer, polymerized in the presence of at least one type of the filler particles, wherein the dispersion has a ratio of filler particle size to synthetic organic polymer particle size of 1.1:1 to 20:1 and ~~The filler-containing polymer dispersion as claimed in claim 18,~~ wherein the synthetic organic polymer particles have a diameter (d50) of 0.03 to 0.5 µm.

20. (previously presented) The filler-containing polymer dispersion as claimed in claim 18, wherein the inorganic filler comprises a member selected from the group consisting of chalk ($CaCO_3$), gypsum ($CaSO_4$) as anhydrite, hemihydrate or dihydrate, silica flour, silica gel, titanium dioxide, talcum, a layer silicate, barium sulfate, barite and mixtures thereof and wherein the organic filler comprises a member selected from the group consisting of polyvinyl acetate, vinyl acetate copolymers, polystyrene, polyethylene, polypropylene, waxes, polybutylene, polybutadiene, copolymers of butadiene and styrene, polyacrylonitrile, resins, polyacrylate esters, polymethacrylate esters polymers containing silyl groups and mixtures thereof.

21. (previously presented) The filler-containing polymer dispersion as claimed in claim 18, wherein the at least one water-soluble polymer comprises a member selected from the group consisting of polyvinyl alcohol, cellulose ethers, carboxymethyl celluloses, hydroxyethyl celluloses, casein, potassium alginate, sodium alginate, polyurethanes and mixtures thereof.

22. (previously presented) The filler-containing polymer dispersion as claimed in claim 18, wherein the dispersion comprises at least one ionic surfactant with an HLB value of 1 to 10.

23. (previously presented) The filler-containing polymer dispersion as claimed in claim 18, wherein the dispersion comprises at least one nonionic surfactant with an HLB value of 13 to 20.

24. (previously presented) The filler-containing polymer dispersion as claimed in claim 18 comprising:

a) 10 to 70% by weight of a water-insoluble organic polymer;
b) 5 to 55% by weight of filler particles;
c) 0.02 to 1.0% by weight of a nonionic surfactant with an HLB value of 13 to 20;
d) 0.01 to 0.1% by weight of an ionic surfactant with an HLB value of 1 to 10;
e) 0.05 to 10% by weight of a water-soluble organic polymer with a molecular weight of more than 600 and an HLB value of more than 15;
f) 24.92% to 84.89% by weight of water and
g) 0 to 30% by weight of additives.

25. (previously presented) The process for the production of a filler-containing polymer dispersion, which comprises: emulsion polymerizing at least one radical-polymerizable monomer in an aqueous phase using a polymerization initiator, the aqueous phase containing filler particles of at least one dispersed filler with a particle size (d50) of 0.01 to 0.5 µm and at least one water-soluble organic polymer with a

molecular weight of more than 600 and an HLB value of more than 15 whereby a dispersion comprising filler particles and polymer particles is formed.

26. (previously presented) The process as claimed in claim 25, wherein the aqueous phase contains an ionic surfactant.

27. (previously presented) The process as claimed in claim 25, wherein the aqueous phase contains a nonionic surfactant.

28. (previously presented) The process as claimed in claim 25, wherein the polymerization initiator is water-soluble.

29. (previously presented) The process as claimed in claim 25, wherein the process is carried out in at least two successive stages comprising:

a) a first stage comprising preparing a dispersion containing:

1) at least one ionic surfactant with an HLB value of 1 to 10 or a nonionic surfactant with an HLB value of 13 to 20 or a mixture of two or more thereof,

2) at least one inorganic filler with a particle size (d50) of 0.01 to 0.5 µm.

3) at least one polymerization initiator and

4) at least one water-soluble organic polymer with a molecular weight of more than 600 and an HLB value of more than 15 and then heating the dispersion to a temperature of 70 to 90°C; and

b) a second stage comprising adding and polymerizing at least one radical-polymerizable monomer in the dispersion prepared in the first stage.

30. (previously presented) The process as claimed in claim 29, wherein the inorganic filler particles are added before the polymerization initiator.

31. (previously presented) The process as claimed in claim 25, wherein the filler particles dispersed in the aqueous phase are pre-emulsified with one or more monomers.

32. (previously presented) The process as claimed in claim 31, wherein the polymerization initiators are added in portions to the dispersion.

33. (previously presented) The filler-containing polymer dispersion, produced by the process claimed in claim 25.

34. (previously presented) An adhesive or surface coating composition, comprising at least one filler-containing polymer dispersion according to claim 18.

35. (previously presented) The adhesive or surface coating composition produced by the process of claim 25.

36. (previously presented) The filler containing polymer of claim 19, wherein the inorganic filler comprises a member selected from the group consisting of chalk ($CaCO_3$), gypsum ($CaSO_4$) as anhydrite, hemihydrate or dihydrate, silica flour, silica gel, titanium dioxide, talcum, a layer silicate, barium sulfate, barite and mixtures thereof and wherein the organic filler comprises a member selected from the group consisting of polyvinyl acetate vinyl acetate copolymers, polystyrene, polyethylene, polypropylene, waxes, polybutylene, polybutadiene, copolymers of butadiene and styrene, polyacrylonitrile, resins, polyacrylate esters, polymethacrylate esters polymers containing silyl groups and mixtures thereof.

37. (previously presented) The filler-containing polymer dispersion as claimed in claim 19, wherein the dispersion comprises at least one ionic surfactant with an HLB value of 1 to 10.

38. (currently amended) The filler-containing polymer dispersion as claimed in claim 18 comprising:

a) 10% to 70% by weight of a water-insoluble organic polymer;

b) 5% to 55% by weight of filler particles;

c) 0.05% to 0.5% by weight of a nonionic surfactant with an HLB value of 13 to 20;

d) 0.02% to 0.5% by weight of an ionic surfactant with an HLB value of 1 to 10;

e) 0.05% to 10% by weight of a water-soluble organic polymer with a molecular weight of more than 600 and an [[HBL]] HLB value of ~~ore~~ more than 15;

f) 24.88% to 84.8% by weight of water; and

g) 0% to 30% by weight of additives.

39. (previously presented) The filler-containing polymer dispersion as claimed in Claim 18 containing at least one nonionic surfactant with an HLB of 13 to 20 and an ionic surfactant with an HLB of 1 to 10 wherein a ratio by weight of nonionic surfactant to ionic surfactant is from about 5:1 to about 1:5.

REMARKS

No claims are being added or cancelled. Claims 19 and 38 are being amended. The amendment adds no new matter. Upon entry of the amendment claims 18-39 will be pending in the application.

The amendment to claim 19 incorporates the features of parent claim 18 and makes that claim independent.

The amendment to claim 38 corrects typographic errors.

This amendment is being filed under 37 C.F.R. 1.116 governing amendment after final rejection. This amendment is appropriate for entry under Rule 1.116 since it does not raise new issues and places the application in allowable condition and/or places the application in better form for consideration of appeal.

Applicants' representative thanks Examiner Cheung and Supervisor Wu for their time and courtesy in the telephone conferences.

As an initial matter Applicants note the impending, non-extendible six month deadline of May 16, 2008.

The objection to claims 19.

The Advisory Action dated 4/10/2008 withdraws the rejection of claim 19 under 35 U.S.C. §102(e) as having each and every feature and interrelationship anticipated by U.S. Patent No. 6,140,394 to Kamiyama et al. The Advisory Action objects to claim 19 as being dependent from a rejected base claim.

Claim 19 depends directly from claim 18. The features of parent claim 18 have been added to claim 19 to make claim 19 independent. Amended claim 19 is independent, no longer depends from a rejected parent claim and is not anticipated by art of record. Applicants traverse the objection to claim 19 and respectfully request that the finality of the present Action be withdrawn.

In summary, Applicants have addressed the objection to claim 19 within the present Office Action. It is believed that claim 19 is patentable over the art of record and prompt favorable action thereon is respectfully solicited. The Examiner is invited to telephone Applicants' attorney at 860 571 2501 if it is deemed that a telephone conversation will hasten prosecution of this application.

Respectfully submitted,

Roberto Pavez Aranguiz

Date: April 24, 2008

By:
James E. Piotrowski
Registration No. 43,860
Attorney for Applicant

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EXHIBIT 10

Acknowledgement Receipt

The USPTO has received your submission at **15:45:47** Eastern Time on **28-APR-2008** .

No fees have been paid for this submission. Please remember to pay any required fees on time to prevent abandonment of your application.

eFiled Application Information

EFS ID	3218575
Application Number	10685613
Confirmation Number	5097
Title	FILLER-CONTAINING POLYMER DISPERSION, METHOD FOR ITS PRODUCTION AND USE
First Named Inventor	Roberto Pavez Aranguiz
Customer Number or Correspondence Address	423
Filed By	James E. Piotrowski
Attorney Docket Number	H 3680A US
Filing Date	15-OCT-2003
Receipt Date	28-APR-2008
Application Type	Utility under 35 USC 111 (a)

Application Details

Submitted Files	Page Count	Document Description	File Size	Warnings
042808_4th_116response_asfiled.pdf	7	Amendment After Final	328127 bytes	◈ PASS

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this

Response Under 37 CFR 1.116 (After Final)
Expedited Procedure
Examining Group 1796

Atty. Docket: H 3680 A US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:
Roberto Pavez Aranguiz

Application No.:	10/685,613	Examiner:	CHEUNG, William K.
Filing Date:	10/15/2003	Group Art Unit:	1796
		Confirmation No.:	5097

For: Filler Containing Polymer Dispersion, Method for its Production and its Use

To: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

FOURTH RESPONSE AFTER FINAL OFFICE COMMUNICATION (AMENDMENT UNDER RULE 116)

Sir:

Applicants respectfully request reconsideration of the rejections and objection in the Office communication mailed on April 10, 2008 in view of the following remarks.

Amendment to the claims begins on page 2.

LISTING OF THE CLAIMS:

Kindly replace the previous claim set with the claim set which appears below.

1. to 17 (cancelled)

18. (currently amended) A filler-containing polymer dispersion, comprising water, particles of at least one filler selected from the group consisting of organic fillers, inorganic fillers and mixtures thereof, at least one water soluble organic polymer with a molecular weight of more than 600 and an HLB value of at least 15, and particles of at least one synthetic organic polymer, polymerized in the presence of at least one type of the filler particles, wherein the dispersion has a ratio of filler particle size to synthetic organic polymer particle size of 1.1:1 to 20:1 and wherein the synthetic organic polymer particles have a diameter (d50) of 0.03 to 0.5 µm.

19. cancelled

20. (previously presented) The filler-containing polymer dispersion as claimed in claim 18, wherein the inorganic filler comprises a member selected from the group consisting of chalk ($CaCO_3$), gypsum ($CaSO_4$) as anhydrite, hemlhydrate or dihydrate, silica flour, silica gel, titanium dioxide, talcum, a layer silicate, barium sulfate, barite and mixtures thereof and wherein the organic filler comprises a member selected from the group consisting of polyvinyl acetate, vinyl acetate copolymers, polystyrene, polyethylene, polypropylene, waxes, polybutylene, polybutadiene, copolymers of butadiene and styrene, polyacrylonitrile, resins, polyacrylate esters, polymethacrylate esters polymers containing silyl groups and mixtures thereof.

21. (previously presented) The filler-containing polymer dispersion as claimed in claim 18, wherein the at least one water-soluble polymer comprises a member selected from the group consisting of polyvinyl alcohol, cellulose ethers, carboxymethyl celluloses, hydroxyethyl celluloses, casein, potassium alginate, sodium alginate, polyurethanes and mixtures thereof.

22. (previously presented) The filler-containing polymer dispersion as claimed in claim 18, wherein the dispersion comprises at least one ionic surfactant with an HLB value of 1 to 10.

23. (previously presented) The filler-containing polymer dispersion as claimed in claim 18, wherein the dispersion comprises at least one nonionic surfactant with an HLB value of 13 to 20.

24. (previously presented) The filler-containing polymer dispersion as claimed in claim 18 comprising:

a) 10 to 70% by weight of a water-insoluble organic polymer;
b) 5 to 55% by weight of filler particles;
c) 0.02 to 1.0% by weight of a nonionic surfactant with an HLB value of 13 to 20;
d) 0.01 to 0.1% by weight of an ionic surfactant with an HLB value of 1 to 10;
e) 0.05 to 10% by weight of a water-soluble organic polymer with a molecular weight of more than 600 and an HLB value of more than 15;
f) 24.92% to 84.89% by weight of water and
g) 0 to 30% by weight of additives.

25. (currently amended) The process for the production of a filler-containing polymer dispersion, which comprises: emulsion polymerizing at least one radical-polymerizable monomer in an aqueous phase using a polymerization initiator, the aqueous phase containing filler particles of at least one dispersed filler with a particle size (d50) of 0.01 to 0.5 μm and at least one water-soluble organic polymer with a molecular weight of more than 600 and an HLB value of more than 15 whereby a dispersion comprising filler particles and polymer particles having a diameter (d50) of 0.03 to 0.5 μm is formed.

26. (previously presented) The process as claimed in claim 25, wherein the aqueous phase contains an ionic surfactant.

27. (previously presented) The process as claimed in claim 25, wherein the aqueous phase contains a nonionic surfactant.

28. (previously presented) The process as claimed in claim 25, wherein the polymerization initiator is water-soluble.

29. (previously presented) The process as claimed in claim 25, wherein the process is carried out in at least two successive stages comprising:

a) a first stage comprising preparing a dispersion containing:

1) at least one ionic surfactant with an HLB value of 1 to 10 or a nonionic surfactant with an HLB value of 13 to 20 or a mixture of two or more thereof,

2) at least one inorganic filler with a particle size (d50) of 0.01 to 0.5 µm.

3) at least one polymerization initiator and

4) at least one water-soluble organic polymer with a molecular weight of more than 600 and an HLB value of more than 15 and then heating the dispersion to a temperature of 70 to 90°C; and

b) a second stage comprising adding and polymerizing at least one radical-polymerizable monomer in the dispersion prepared in the first stage.

30. (previously presented) The process as claimed in claim 29, wherein the inorganic filler particles are added before the polymerization initiator.

31. (previously presented) The process as claimed in claim 25, wherein the filler particles dispersed in the aqueous phase are pre-emulsified with one or more monomers.

32. (previously presented) The process as claimed in claim 31, wherein the polymerization initiators are added in portions to the dispersion.

33. (previously presented) The filler-containing polymer dispersion, produced by the process claimed in claim 25.

34. (previously presented) An adhesive or surface coating composition, comprising at least one filler-containing polymer dispersion according to claim 18.

35. (previously presented) The adhesive or surface coating composition produced by the process of claim 25.

36. cancelled

37. (currently amended) The filler-containing polymer dispersion as claimed in claim 18 [[19]], wherein the dispersion comprises at least one ionic surfactant with an HLB value of 1 to 10.

38. (currently amended) The filler-containing polymer dispersion as claimed in claim 18 comprising:

a) 10% to 70% by weight of a water-insoluble organic polymer;
b) 5% to 55% by weight of filler particles;
c) 0.05% to 0.5% by weight of a nonionic surfactant with an HLB value of 13 to 20;
d) 0.02% to 0.5% by weight of an ionic surfactant with an HLB value of 1 to 10;
e) 0.05% to 10% by weight of a water-soluble organic polymer with a molecular weight of more than 600 and an [[HBL]] HLB value of ~~ore~~ more than 15;
f) 24.88% to 84.8% by weight of water; and
g) 0% to 30% by weight of additives.

39. (previously presented) The filler-containing polymer dispersion as claimed in Claim 18 containing at least one nonionic surfactant with an HLB of 13 to 20 and an ionic surfactant with an HLB of 1 to 10 wherein a ratio by weight of nonionic surfactant to ionic surfactant is from about 5:1 to about 1:5.

REMARKS

No claims are being added. Claim 19 is being cancelled without prejudice to filing in a later application and only to incorporate its features in claim 18. Claim 36 is being cancelled without prejudice to filing in a later application. Claims 18, 25 and 37-38 are being amended. The amendment adds no new matter. Upon entry of the amendment claims 18 and 20-35 and 37-39 will be pending in the application.

The amendment to claim 18 incorporates the features of dependent claim 19.

The amendment to claim 25 incorporates the features of claim 19.

The amendment to claims 37 changes dependency thereof.

The amendment to claim 38 corrects typographic errors.

This amendment is being filed under 37 C.F.R. 1.116 governing amendment after final rejection. This amendment is appropriate for entry under Rule 1.116 since it does not raise new issues and places the application in allowable condition and/or places the application in better form for consideration of appeal.

Applicants' representative thanks Examiner Cheung and Supervisor Wu for their time and courtesy in the telephone conferences.

As an initial matter Applicants note the impending, non-extendible six month deadline of May 16, 2008.

The objection to claim 19.

The Advisory Action dated 4/10/2008 withdraws the rejection of claim 19 under 35 U.S.C. §102(e) as having each and every feature and interrelationship anticipated by U.S. Patent No. 6,140,394 to Kamiyama et al. The Advisory Action objects to claim 19 as being dependent from a rejected base claim.

Claim 19 depends directly from claim 18. The features of claim 19 have been incorporated into parent claim 18. The objection to claim 19 is obviated.

The rejection of claims 18 and 20-39.

The Advisory Action dated 4/10/2008 indicates that the U.S. Patent No. 6,140,394 to Kamiyama et al. does not teach or suggest the polymer particle size range of claim 19. That size range has been incorporated into claims 18 and 25. Applicants traverse the present rejections of claims 18, 20-35 and 37-39. Claims 18, 20-35 and 37-39 are patentable for at least this reason.

In summary, Applicants have addressed the pending rejections and objection. It is believed that claims are patentable over the art of record and prompt favorable action thereon is respectfully solicited. The Examiner is invited to telephone Applicants' attorney at 860 571 2501 if it is deemed that a telephone conversation will hasten prosecution of this application.

Respectfully submitted,

Roberto Pavez Aranguiz

Date: April 28, 2008

By:
James E. Piotrowski
Registration No. 43,860
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